WHAT IS CLAIMED IS:

1. A smectite clay slurry, comprising:

(a) at least 2 wt.% of one or more smectite clays, active clay basis;

(b) from about 0.5 to 15 wt.% based on the weight of the smectite clay active clay basis of one or more phosphonate additives; and

(c) water.

2. A smectite clay slurry according to Claim 1, wherein the smectite clay is hectorite.

3. A smectite clay slurry according to Claim 2, wherein the smectite clay is beneficiated hectorite.

4. A smectite clay slurry according to Claim 1, wherein the clay slurry comprises 5-20 wt.% smectite clay, active clay basis.

5. A smectite clay slurry according to Claim 1, further comprising a biocide.

6. A smectite clay slurry according to Claim 1 wherein the phosphonate additive is selected from the group consisting of:

a) phosphonate compounds that contain at least two moieties having the structure —$PO(OH)_2$, and salts thereof, and

b) phosphinate compounds that contain at least two moieties having the structure —PO(OH)—, and salts thereof, and

c) compounds which may form phosphonic or phosphinic acids, or salts thereof, under the conditions of use in making the slurry.

7. The smectite clay slurry according to Claim 1 wherein the phosphinate additive is selected from the group consisting of:

a) diphosphonic acids of formula $R^1R^2C(PO(OH)_2)_2$ and their salts, and

b) diphosphonic acids of formula R^1-$CR^2(PO(OH)_2)$-R^3-$CR^2PO(OH)_2$-R^1 and their salts, and

c) phosphonic acid salts with general formula $R^1R^4C=C(PO(O^-)_2)_2$

where R^1 is selected from the group comprising H, a linear or branched alkyl, alkene, hydroxyalkyl, aminoalkyl, hydroxyalkene, aminoalkene with 1 to 22 carbon atoms or an aryl, hydroxyaryl, aminoaryl with 6 to 22 carbon atoms; R^2 is selected from the group comprising R^1 and OH; R^3 is an alkyl with 0 to 22 carbon atoms and R^4 is selected from the group R^1.

8. A smectite clay slurry according to Claim 1, wherein the phosphonate additive is selected from the group consisting of 1-hydroxyethylene-1,1-diphosphonic acid, a sodium salt thereof or an ester thereof.

9. A smectite clay slurry according to Claim 8, wherein the pH is in a range of about 6 to about 8.

10. A smectite clay slurry comprising:

(a) about 2 to 25 wt.% hectorite clay, active clay base;

(b) about 0.5 to 6 wt.% based on the weight of the hectorite clay active clay basis of one or more phosphonate additives; and

(c) water.

11. A smectite clay slurry according to Claim 10, where the phosphonate additive is selected from the group consisting of a 1-hydroxyethylene-1,1-diphosphonic acid, a salt thereof and an ester thereof.

12. A method of making a smectite clay slurry, comprising:

(a) treating a mixture of one or more smectite clay and water with one or more phosphonate additives to form a clay slurry; and

(b) adjusting the pH of the clay slurry to above 5.5.

13. A method of making a smectite clay slurry according to Claim 12, wherein the adjusting of the pH is done by adding HCl, H_3PO_4, H_2SO_4, or CH_3COOH.

14. A method of making a smectite clay slurry, comprising:

(a) treating a mixture of one or more smectite clays and water with one or more phosphonate additives to form a clay slurry; and

(b) shearing the clay slurry.

15. A method according to Claim 14, wherein the smectite clay is hectorite.

16. A method according to Claim 14, wherein the phosphonate additive is 1-hydroxyethylene-1,1-diphosphonic acid tetra sodium salt.

17. A method of making a smectite clay slurry according to Claim 14, wherein the shearing is performed by a Gaulin homogenizer.

18. A construction material comprising the smectite clay slurry according to Claim 1.

19. A construction material comprising the clay slurry according to Claim 1, wherein the construction material is selected from the group of concrete, asphalt, cement, or sand.

20. A paint comprising the smectite clay slurry according to Claim 1.